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Michigan Supreme Court
P.O. Box 30052
Lansing, Michigan 48909

Dear Justices:

The Court is considering adoption of the standards for electronic filing that have been proposed and are under consideration by the National Center for State Courts (NCSC) as part of its Case Management Automation Functional Standards Project

Accepting the Court's invitation, I am submitting two sets of comments on certain of the standards included in the NCSC document. The first offers some brief comments on three of the standards. The second abandons brevity altogether in providing some detailed comments on the all-important question of what format documents should take when sent to the courts under an e-filing program.

In addition to my law practice, I have since 1997 operated the Courts.net web site – found at http://www.courts.net – designed as a centralized directory of court web sites across the nation. The Courts.net site includes some editorial information and links to other sources on a number of technology issues of concern to courts, including electronic filing issues.

I offer one qualification. I am a shareholder in a large Michigan law firm, and I am a member of the Board of Directors and the Technology Chair for the Michigan Defense Trial Counsel. The comments, observations, and recommendations that I make here are, however, mine alone.

Very truly yours,

M. Sean Fosmire
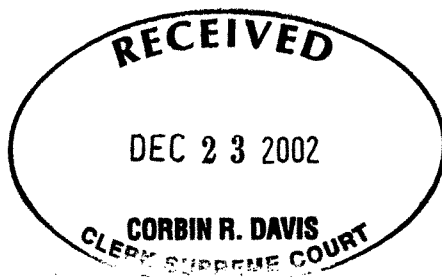
COMMENTS ON SECTIONS 1.1A, G, and H

Standard 1.1A Official Court Record
The electronic document will be the official court record.
Paper records, if maintained, will be considered a copy of the
official court record.

I agree with this concept. The electronic version of a document should be regarded as the "official" version, so long as steps are taken to safeguard its integrity by means of a secure network serving the court. See comments made under sections 1.1G and 1.1H below. In addition, maintaining the integrity of electronic files includes the use of a secure and effective backup system. The benefit of designating the e-copy as the official record is that it can be readily found, viewed, and if necessary compared to an available paper version.

In my presentations and writings on these topics, I have characterized the paper document as a "temporary and disposable copy" of the electronic file, which we should consider as the definitive document.

Standard 1.1G -- Identity of the Sender
Courts will authenticate the identity of persons interacting
with its electronic filing system.

Standard 1.1H -- Integrity of Transmitted and Filed Documents and Data
Courts will maintain the integrity of transmitted documents
and data, and documents and data contained in official court
files, by complying with current Federal Information
Processing Standard 180.1 or its successor.

These both come under the rubric of security. I believe that the concerns that these standards address are significantly overrated, and the solution that they propose is far too drastic.

Security issues relating to online communications cover three concerns:

1. Privacy -- Preventing unauthorized users from seeing the document.
2. Authentication of the sender -- Is the person purporting to send the document who he says he is?
3. Authentication of the document -- Is the document you receive the same document he sent, or has it been tampered with on the way?

Encryption and security

A point which should be emphasized is that the first issue is irrelevant to the court's concerns. All briefs and other filings are, by their nature, public documents. We really don't care if someone outside the chain of communication reads an appeal brief.

Some of the encryption products that are available, including the secure hash standard discussed below, are excellent ways of keeping a corporation's merger plans or its litigation strategies from prying eyes, but they simply have no relevance in this context. The CIA should be concerned about encryption issues; the courts have no need to do so.

The NCSC comments tell us that the FIPS Standard 180.1 cited in Standard 1.1H is a "secure hash" standard, but they do not disclose where to find the text of standard 180.1. After some investigation, I found it at:

http://www.itl.nist.gov/fipspubs/fip180-1.htm

Even if encryption were a serious concern for the courts, I personally think that FIPS 180.1 is much too cumbersome for this purpose. I would challenge anyone reading this comment to look at the NIST.GOV web page referenced above and understand any of the things that are said there. A system which cannot be understood by reasonably intelligent users is simply not going to be used by them.

A key question is whether there is any available software which incorporates the Secure Hash Standard described in FIPS 180.1. My search has found none which are focused on protecting documents sent by e-mail. That being the case, the adoption of this standard would seriously impede the adoption of the system, not enhance it.

Authenticating the sender

While it is important to provide safeguards to ensure that the person sending an electronic document is who he purports to be, this issue is somewhat overemphasized. The issue arises because of the online practice of "spoofing", in which someone sends a message purporting to be from someone else, either to send "spam" (unsolicited e-mail advertising) or to disseminate viruses or other malevolent payloads. "Spoofing" a sender, however, is not a serious risk in the context of electronic court filing.

In developing electronic filing processes, the court's current practices should always be kept in mind as a comparison. Courts receive numerous paper filings on a daily basis, and these are entered into the system without any question arising as to the identity of the person sending them.

Consider a standard paper brief received today by mail from John R. Smith, attorney for the appellant. The courts currently have no procedure in place to doublecheck whether he did in fact send the brief. It is theoretically possible that his opponent, intent on sabotaging his case, has filed a spurious brief in his place, but the courts have not instituted procedures to avoid this problem because the problem has not arisen – no one has yet thought of this clever move – and because the problem, if and when it arose, would be self-correcting and could be handled by ad hoc measures.

If a spurious filing were to be made, either under the current system or under an e-filing system, the court would soon find that it had two versions of an appellant's brief. Inquiries could then be made and presumably court personnel would soon learn which of the two filings was true and which was a impostor.

If authentication of the filer's identity is not a current problem, we should not try to make it a new one by complex new procedures. A spurious filing can appropriately be handled by systems and procedures currently in place.

Authenticating the document

It is important to ensure that a document which is sent to a court is not changed or altered, either before or after it arrives at the clerk's desk. Since the delivery of e-mail is typically near-instantaneous, however, the risk of tampering with the document while it is in transit approaches zero, so long as the court's mail servers are properly protected. It may therefore be that it would

be reasonable to impose **no security requirement** in this area, assuming that the court's mail server uses an appropriately high level of network security.

The Washtenaw Circuit Court has used online filing via e-mail, without any high-level security measures in place, for the last several years. Soliciting comments from that Court about its experiences in this area would be a good idea.

COMMENTS ON SECTION 1.1D

I submit these more detailed comments on the section governing the format of documents to be filed with courts.

The text of this standard is as follows:

Standard 1.1D Document Format

Courts will require electronic documents to be submitted in a format that is renderable, and, when possible, searchable and tagged. Courts will only require formats for which software to read and write documents is available free for viewing and is available free or at a reasonable cost for writing and printing.

TECHNICAL ERRORS IN THE NCSC DOCUMENT

The commentary to this standard begins:

"'Renderable' means that the display of a filed document can be fixed. Anyone viewing the document will see it displayed exactly as intended by the filer. Portable document format (PDF) and TIFF provide this functionality today. Although no current format guarantees 'absolute' fidelity to the appearance of a document on the filer's screen, PDF and TIFF provide exceptionally high fidelity. Portable document format offers the advantage that the document and its format cannot be changed. TIFF documents can be modified to change or add text."

There are two significant technical errors in this paragraph.

First error –
"Portable document format offers the advantage that the document and its format cannot be changed."

This is absolutely wrong – the text contained within PDF file can easily be changed. A PDF is created from a word processing document, either by using Adobe Distiller or – much more commonly – printing to a print driver, using Adobe's PDFWriter, built into Acrobat, or by using a third party driver. These files are essentially formatted text and graphics, with a PDF wrapper around them. The text can be modified by using the "Text Touch-up" tool included with Acrobat.

The amount of text that can be changed is limited: The touch-up tool allows only one line of text to be selected at a time. It is not possible to delete or to add entire paragraphs, but within those limits there is still a lot of mischief that can be done. The word "not" may be added or deleted, the prefix "un-" may be added or deleted, the name of one person may be substituted for another, etc.

I attach as Exhibit 1 a document which displays "before and after" images to demonstrate how easy it is to change the text within a PDF document. The text is from the "Standards for Electronic Filing Processes" document itself. Note the changes in the last two sentences.

It is possible to create a "locked" PDF file which cannot be edited in this fashion, but this requires some knowledge of the security features in Acrobat and is not likely to be widely used by attorneys and their staffs. A person not very familiar with the locking process may also inadvertently block both copying from and printing the document, dramatically reducing its usefulness.

Second error –
"TIFF documents can be modified to change or add text."

This is, again, absolutely wrong. A TIFF is a "tagged image file format", but it is by definition an image rather than text. A scanner is used to create an image, often but not always a TIFF file, from a document. The creation of the

TIFF is very much like a photograph: it creates only an image, and it does not create text. It may be best considered as an electronic photocopy of the original.

The process of Optical Character Recognition (OCR) must be used to convert the image to machine-readable text. The text created from a document that has undergone OCR, however, is not included in the TIFF; it is exported to one of several text formats.

A TIFF is indeed faithful to the format of the original, just as a photocopy is. It just isn't very useful. It does not contain any text, so there is no opportunity to copy text or to process it in any of the ways discussed below. There can also be no modification or addition of text, except perhaps by electronic touchup analogous to the use of "white-out" on a paper document.

> NOTE: I submitted the above comments to the NCSC. Recently, the Committee issued an updated version of the proposal, and the two cited errors appear to have been corrected. The revised proposal, however, is misleadingly marked and is very difficult to find. A link to the revision is found on the Technology Standards Page
> – http://www.ncsconline.org/D_Tech/Standards/Standards.htm –
> bearing the label "Electronic Filing Processes - PDF format", under the misleading heading "Consolidated Comments on Standards for Electronic Filing Processes". Unfortunately, the Committee has also left the original set of proposals up under the original link, and the NCSC page does not make it clear that the second item is a revision.

RECOMMENDATION: FILINGS IN NATIVE FORMAT

It is my position that attorneys and litigants should file documents with the court in their native format – i.e., Word or WordPerfect format – or in an acceptable lesser-inclusive alternative such as Rich Text or plain text format.

> *Note: The comments that are made below relate to original documents, such as briefs filed by the parties and the transcripts of deposition and trial testimony. These are the documents originated by lawyers and by court reporters, which occupy much of any court's filing space. By contrast, the documents introduced as trial exhibits are invariably paper documents, and will probably always be such, at least for the foreseeable future. For the purpose of electronic filing, all documents which are trial exhibits or exhibits to a brief or pleading have to be scanned – that is, converted from paper to electronic format – if they are to filed electronically.*

In developing any new information-sharing system, we should always keep the **needs of the user** in mind. In this context, the "user" may refer to both the originating user, the person who creates a document, and the end user, the person who reads or uses it – the alpha and the omega of the process, if you will.

I believe that it is most important to ensure that:

- The document can be easily created and submitted to the court by the submitting attorney and his staff.

- The document when received by the court may be easily used and processed by judges, clerks, researchers, and staff.

- The system can also be used by parties and attorneys who do not have state of the art computer systems and by *in pro per* litigants.

I will expand upon each in turn.

Ease of file creation

I think that any electronic filing system should emphasize the ease of use for the originating user, the attorney and his staff – typically, the legal secretary or paralegal. This factor strongly militates in favor of the native format standard proposed here.

All technological advances have a price in terms of the time and energy it takes to learn how to adapt to them, and at each juncture there are always going to be some who are left behind. We all know lawyers and judges who simply do not want to learn how to use new tools and work in new ways. This does not mean that we need to stop the forward progress of technology, but it does mean that we should always keep the needs of the user in mind as we expand to new areas, in order to provide for the least burden and the widest possible acceptance and use of new techniques.

The easier we can make the process of creating a electronic document and getting it to the court, the more widely the system will be used. By contrast, a system which is more difficult in design will necessarily lose some users along the way.

These considerations militate strongly in favor of using the native Word or WordPerfect format, as I recommend, because **the document will not have to be changed at all** for the vast majority of users.

The practice of law is vastly different today than it was when I started practice in 1980 because all documents now start out in electronic format. The production of a letter, pleading, motion, or brief begins with the creation of an electronic file, on the computer screen and then saved to the hard disk, and then that electronic file is converted to paper by printing it. The printed version is what gets to the court under current paper document filing processes. The conversion to electronic filing simply removes the paper from the stream at that point and keeps the document in electronic format as it is sent and as it arrives at the court's servers. From there, it may be printed or it may be kept in electronic format for reading and use, depending on the needs and preferences of the ultimate user. (A couple of pages from my presentation entitled "Lawyers and Their Documents – From Electrons to Paper and Back Again" are attached as Exhibit 3 for the Court's perusal.)

Processability

I made up this word to describe the concept that electronic text is most useful if the end user can do something with it: search it, copy and paste it, and import it into software that can analyze it in more detail.

> Search – The ability to do word searches (such as looking for each occurrence of "warranty") or Boolean searches (looking for "implied" and "warranty") is probably the single most significant advantage that electronic text has over paper documents. Everyone who uses computers knows how dramatically this capability has increased productivity.

> Copy and paste – Anyone who has tried to quote extensively from a judicial opinion or a brief knows that it is much simpler to copy the text from the source and paste it into the destination document than it is to retype it. **Judicial secretaries everywhere will thank you profusely if you make this a central criterion.**

> Other software – There are numerous computer programs that are available to help with more detailed "text crunching" than is available with a word processor or a web browser. There are sure to be more in the future. Using a readily-recognized and highly importable format can permit such software to be used when the end user desires to do so. Using a less flexible format would make it difficult or impossible to do so.

All of these considerations underlie my belief that an electronic filing system provide for documents to be submitted in their native format rather than in PDF format. (TIFF format should not even be a consideration, in my opinion.)

The chart attached as Exhibit 2 highlights the positives and negatives of each possible alternative.

Native format and alternatives

In my estimation, a system which permits the submission of documents in any of the following formats, in descending order of preference, would be the most user-friendly for both lawyers and their staffs and courts and their staffs.

> Native format (Microsoft Word or Word Perfect)
> Rich Text Format
> Plain text format

Some thoughts on each are:

- The first, the true native formats of Microsoft Word or Word Perfect, would cover about 95% of users. (Each program claims to be able to read and convert files created by the other, and that claim is generally but not universally true.) Ross Kodner, a legal technology consultant based in Milwaukee[1], has for many years encouraged lawyers to learn to be "word processing ambidextrous", since clients, courts, and other lawyers will regularly send them documents in both formats. The ability to use both word processing formats gives the user a decided advantage, somewhat like the ability to speak Spanish as well as English.

- The second, Rich Text Format, is one step down as a lesser common denominator between the two and other formats. A person using either MS Word or WordPerfect can readily import and convert an RTF file to his own format with no loss of formatting, except that information presented in tables will not convert.

- Plain text format is the lowest common denominator, and should be included as a last-resort format for those whose systems cannot use RTF. (Absent the use of document conversion software, for example, plain text and HTML are the only choices for interchange of documents between users on the Macintosh and Intel-Windows platforms.)

"Fixed display"

I disagree with the proposed requirement of a "fixed display". I believe that the commentary to Standard 1.1D places too much emphasis on the conformance of the electronic file to paper format in calling for the display to be "fixed". In doing so, it deviates from the principle announced in Standard 1.1A that:

"The electronic document will be the official court record. Paper records, if maintained, will be considered a copy of the official court record."

The submission of original documents in their native format comes close to the goal of a "fixed" display, but on occasion the opening of a word processing file will result in some minor changes in display, depending on the default settings of the computer on which it is opened. These occasional minor changes, however, would not affect the useful and flexibility of the electronic document, as discussed above.

"Tagging" documents

The standard goes on to call for "tagged" documents, and the definition states:

"'Tagged' means that a document format contains XML and HTML tags. Such tags are necessary for computers to make direct use of key pieces of information contained in a document. Image files are not taggable."

In my view, it would be preferable to take these things one step at a time. The courts would do better to set up a system which is simple and easy to use at the outset, and then look at doing such things as marking up files with "tags" at a later time. In other words, tagging documents is entirely unnecessary at the present time.

I make this comment in part in recognition of the fact that all of the major software vendors, including Microsoft and Corel's WordPerfect, are migrating their products to an XML[2] standard. It is anticipated that documents produced by standard word processors will be XML-based documents within a few years, and then they will automatically carry XML tags which will provide the "hooks" that this part of the standard anticipates. We are not there yet, and I do not believe that the courts should push the legal marketplace faster than it is going on its own. Unless the Court has

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[1]   Mr. Kodner is president of MicroLaw, Inc. See http://www.microlaw.com

[2]   XML stands for "extensible markup language", and it uses paired tags to mark text, as does HTML, the hypertext markup language used to create web pages.

adopted or is about to adopt some new technology that would make use of these tags, I believe that this part of the standard can wait for a while.

The free software criterion

In truth, I do not understand the reason that the NCSC document calls for the use of only those formats for which there are free viewers or readers available. This standard would make sense for documents posted by the courts on their web sites, such as copies of judicial opinions, administrative orders, and the like, since it would ensure the maximum level of distribution to the public, free of cost considerations. But the use of native format for items submitted to the courts would not increase cost or create unnecessary obstacles to using the documents, since all courts today have some kind of word processing software available to them. As I noted above, each of the two major products are able to read and convert the documents created by the other.

The adoption of the "word processing ambidextrous" approach would require that courts which use WordPerfect also install a copy of Word, or vice versa. The cost of doing so, however, is relatively small, and this issue should not be a major consideration[3].

Conclusion

Permitting the submission of documents in several formats, with a preference for the files in their native format, would make any electronic filing system easier for all users, both at the beginning and at the end of the process, and would enhance the level of acceptance and use of an electronic filing system among attorneys and litigants.

I:\Topics\E-filing\comments.wpd

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[3] If a court determined that the cost of installing "the other" word processor was too high, it could purchase a product called QuickView Plus for about $40. This product, though not free, is a low-cost "universal viewer" which can display the contents of any file generated by Word, WordPerfect, and over 200 other programs.

EXHIBIT 1 – Demonstrating changes to a PDF file
(see the last two lines of each item)

Before:

Because the courts have standards for the use of XML, and it is the only mechanism available to support interoperability of all court and vendor operated electronic filing processes, it is appropriate for adoption as a standard.

Standard 1.1D Document Format

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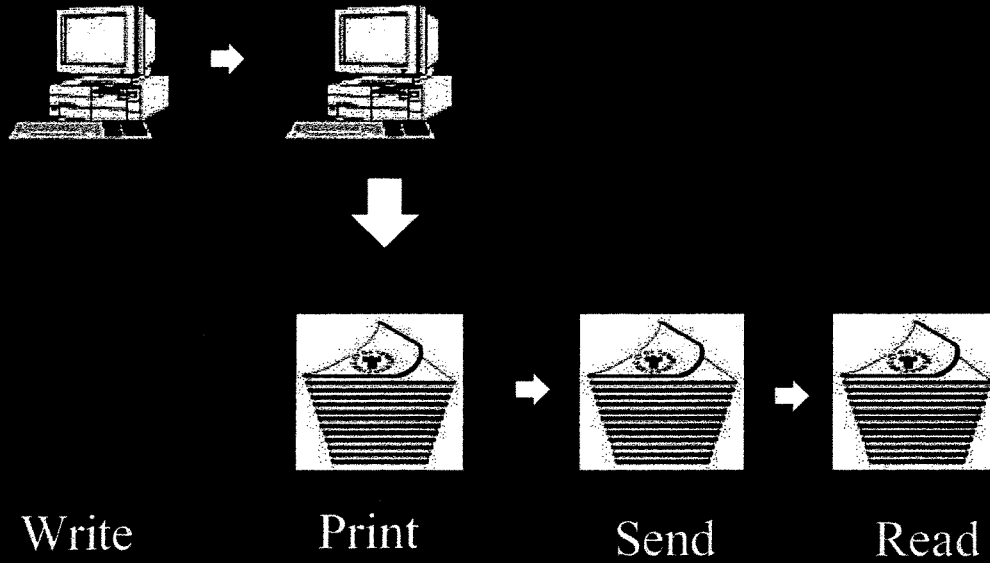
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